HANDBOOK OF PHONOLOGICAL DATA FROM A SAMPLE OF THE WORLD'S LANGUAGES

A Report of the Stanford Phonology Archive

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860 Otomi

860 01 p
[p-preaspirated] [60]
(free)

860 02 p-aspirated[30]

860 03 p-ejective[30]

860 04 b
[beta] [61]
(free)

860 05 b-implosive[01]

860 06 t
[t-preaspirated] [60]
(free)

860 07 t-aspirated

860 08 t-ejective

860 09 d
[eth] [62]
(free)

860 10 d-implosive[01]

860 11 k
[k-preaspirated] [60]
(free)

860 12 k-aspirated[30]

860 13 k-labialized[31]

860 14 k-ejective

860 15 k-ejective-labialized[31]

860 16 g
[gamma] [61]
(free)

860 17 g-labialized[31]

860 18 t/s-ejective[32]

860 19 t/s-hacek[33]

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(loan)

20 t/s-hacek-ejective[32]

21 phi

22 s

23 z

24 s-hacek

25 x

26 x-labialized[31]

27 m
[b-prenasalized] [62]

28 m-voiceless[34]

29 m-glottalized[35]

30 n
[d-prenasalized] [62]
[eng] [63]

31 n-voiceless[34]

32 n-glottalized[35]

33 l[33]
(loan)

34 r-flap[36]

35 glottal stop

36 h
[eng-voiceless] [34]

51 i

52 i-nasalized

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53 e

54 ash

55 ash-nasalized

56 i-bar[02]

57 schwa[02]

58 a[02]

59 a-nasalized

60 u

61 u-nasalized

62 o

63 o-open

64 yod

65 yod-glottalized

66 yod-voiceless[34]

67 w

68 w-glottalized

69 w-voiceless[34]

81 high
[higher-high] [64]
[high-falling] [65]
(free)

82 low
[lower-low] [66]

83 low-rising[03]
[lower-mid] [67]
(free)

860 $a Otomi $b Tenango $d Oto-Manguean $e Mexico (Hidalgo) $f 215,000 $g Merritt Ruhlen$g John Crothers (review)

860 $a Blight, Richard C. and Eunice V. Pike $b 1976 $c "The Phonology of Tenango Otomi" $d IJAL 42, 51-57 $q informants

860 $a **ASPIRATED STOPS** $A Blight and Pike find that the clusters /p.h, t.h, k.h/ occur stem medially, and that /t.h/ also occurs stem initially. It is not clear why these are analyzed as clusters. The only other clusters with /h/ are /h.m, h.n, h.w, h.yod/, the last two of which could be analyzed as /w-voiceless/ and /yod-voiceless/, respectively. In the absence of productive clustering of /h/ the Archive favors interpretation of /p.h/, etc., as aspirated stops. Another problem is that the authors find stem initial clusters /m.p.h, n.t.h, n.h/. It appears that in this case /p.h/, etc. could be analyzed as allophones of /p/, etc. [JHC]

860 $a **EJECTIVE CONSONANTS** $a **IMPLOSIVE CONSONANTS** $a **GLOTTALIZED CONSONANTS** $A Phonetically Tenango Otomi has ejective and implosive stops and glottalized /w/ and /yod/. Glottalization of nasals apparently also occurs in stem initial and stem medial position. Blight and Pike analyze this glottalization as clustering of /glottal stop/ with other consonants. Their motivation for

this is not clear. Most of the glottalized consonants occur in stem-initial position. There is no question of an internal syllable boundary, and an internal morpheme boundary does not seem likely. Furthermore, /glottal stop/ does not seem to form clusters in a very productive way, i the system of clusters described. It occurs only after /p, t, k/, never before; only before /b, d/, never after; only before /w, yod/, never after. The authors report stem initial clusters /m.glottal stop.m/ and /n.glottal stop.n/, but not /m.glottal stop/, /n.glottal stop/, /glottal stop.m/, or /glottal stop.n/. (There is a cluster analyzed as /n.glottal stop/, but phonetically this is [eng.glottal stop].) There are no clusters of /glottal stop/ with /phi, x, z, r-flap, h/. It is also notable that the really productive pattern of stem-initial clusters is nasal plus consonant, and that many of the glottalized consonants occur in such clusters. From the point of view of the Archive these are more like complex units than clusters. [JHC]

860 $a **INTONATION** $A "Contrastive intonation, signaling the attitude of the speaker, is carried in part by voice quality and by raising or lowering the general pitch with which an utterance, or part of an utterance, is spoken." See p.56.

860 $a **NASAL VOWEL PROSODY** $A "There seems to be lack of contrast of oral versus nasal vowels in the verb prefixes and the proclitics which precede a noun stem. Some of the verb prefixes are nasalized when preceding /m/, /n/, and nasal vowels, but are oral when preceding non-nasal phonemes." (p.54-55) Many stems have either all oral or all nasal vowels; there are, however, stems which contain both.

860 $a **PHONOLOGICAL WORD** $A final C: none

860 $a **STRESS** $A "The syllable with primary stress is the nucleus of the phonological word. It is the first syllable of a stem.... There are a few four-syllable stems. With these words, primary stress occurs on the first syllable and a secondary stress on the third.... A stressed syllable is perceived as slightly louder and slightly longer than other syllables." (p.56)

860 $a **SYLLABLE** $A (C)(C)V(C)(C) $A The interpretation of Tenango Otomi syllable structure presents many problems. In the Archive many clusters in the source are reanalyzed as units, with the result that only clusters of two consonants occur in syllable initial position. It would seem also that although word medial consonant clusters are indeterminate as to syllable division, one could make a case for medial syllables closed by one or two consonants, e.g. /d.i-nasalized.n.s.k.w.a/ "rabbit." (p.56) [JHC]

860 $a **TONE** $A domain of tone: syllable $A "Lexical tone contrasts on all syllables except the prepause syllable, and the final syllable of a multisyllable stem. Intonation is contrastive on the prepause syllable, and unless modified by intonation, a stem-final syllable has high tone.... On the nonstressed syllables, only the contrast of high versus low tone occurs." (p.55)

860 01 $A The implosives are said to be "frequently actualized as a voiced implosive." (p.52) The other articulation is not described. [JHC]

860 02 $A /i-bar/, /schwa/, and /a/ are described as "central back." (p.53)

860 03 $A Though the rising tone is not explicitly called "low," there are hints that it is, for example the low allotone, and the fact that the definite article takes low tone before the rising tone, as it does before the low tone. [JHC] "The upglide [on /low-rising/] is more perceptible in syllables which are closed with /m, n/ than in open syllables." (p.56)

860 30 $A /p-aspirated/, /k-aspirated/, and /p-ejective/ only occur stem medially. (p.52, 54)

860 31 $A /k-labialized/, /k-ejective-labialized/, /g-labialized/, and /x-labialized/ are analyzed by Blight and Pike as a cluster with /w/. However, aside from clusters with initial nasal, /w/ forms clusters only with velars. This favors the unit interpretation. [JHC]

860 32 $A Blight and Pike interpret /t/s-ejective/ and /t/s-hacek-ejective/ as clusters with /glottal stop/, which are affricated before vowels, but not continuants (/m, yod/). See p.52. Given the Archive interpretation of glottalization, these clusters are taken as units (see footnote on glottalized consonants). It is not clear how to analyze the authors' clusters /s.glottal stop.yod/ and /s.glottal stop.m/. [JHC]

860 33 $A "A voiced lateral /l/ and a voiceless alveopalatal affricate /t/s-hacek/ occur in Spanish loan words." (p.51)

860 34 $A The voiceless nasals and glides are analyzed by Blight and Pike as a cluster of /h/ plus nasal. There being few such clusters (see footnote on aspirated stops) the voiceless nasals have been interpreted here as units. The cluster written /n.h/ by Blight and Pike represents a velar nasal followed by [h], or by [eng-voiceless], in free variation. [JHC]

860 35 $A The glottalized nasals are analyzed by Blight and Pike as sequences of /nasal.glottal stop.nasal/. [JHC]

860 36 $A "The flap /r-flap/ occurs in a few morphemes only, but it occurs frequently because...the morphemes" in which it occurs (e.g. the definite article and possessive pronoun) are frequent.

(p.51-52)

860 60 $A "The voiceless fortis stops /p, t, k/ are frequently preaspirated when, as a single consonant, they are initial in a stressed syllable.... In other environments, they are not preaspirated, except that when following a vowel, they may be preaspirated in slow speech." (p.52)

860 61 $A "The voiced lenis stops /b, d, g/ have stop allophones when following nasals.... In other environments, /b, d, g/ vary freely from a lenis stop to a fricative, but the stop is the more frequent." (p.52)

860 62 $A "When preceding oral vowels, the bilabial nasal /m/ has an allophone with a stop release [m/b], and the alveolar nasal /n/ has [n/d]. These allophones with a stop release contrast with a consonant cluster composed of nasal plus stop, in that the stop phoneme which is a part of a consonant cluster is of longer duration than the stop which is a part of a complex allophone [m/b] or [n/d]." (p.53)

860 63 $A /n/ is realized as [eng] before a velar, /h/, /w/, and the sequences /glottal stop.w/ or /glottal stop/ plus vowel. (p.52f)

860 64 $A "When high tone is on a syllable with /i/, it has a slightly higher allotone than when it is with other vowels." (p.55)

860 65 $A "A stressed high tone usually has a slight downgliding allotone when the vowel is between voiced consonants." (p.55)

860 66 $A "A low tone in a stressed syllable is slightly lower than a nonstressed low." (p.55)

860 67 $A "An upgliding tone is occasionally actualized as a level pitch which is slightly higher than a low tone." (p.55)